

1 **WHAT IS CLAIMED IS:**

2 1. A modulated optical mouse for a personal computer, the optical mouse
3 comprising:

4 a body having a predetermined space defined inside the body and having at least
5 one lead securely provided inside the space and feet each electrically connected to one
6 of the feet;

7 at least one light emitting diode mounted inside the space to electrically connect
8 with the lead, the light emitting diode being at a bottom of the body; and

9 at least one sensor received in the space to electrically connect with the lead and
10 to correspond to the reflective light from reflective surface (table surface) of light
11 emitting diode.

12 2. The modulated optical mouse as claimed in claim 1 further comprising at
13 least one control element received in the space of the body to be electrically connected
14 to the lead.

15 3. The modulated optical mouse as claimed in claim 2, wherein the control
16 element is a control IC.

17 4. The modulated optical mouse as claimed in claim 1 further comprising an
18 optical element received in the space of the body.

19 5. The modulated optical mouse as claimed in claim 4, wherein the optical
20 element is composed of a light guide element adjacent to the light emitting diode and a
21 second light guide element adjacent to the sensor.

22 6. The modulated optical mouse as claimed in claim 4, wherein the at least one
23 light emitting diode and the at least one sensor are encapsulated inside the body.

24 7. The modulated optical mouse as claimed in claim 2, wherein the light

emitting diode, the sensor and the control element are C.O.B. type.

8. The modulated optical mouse as claimed in claim 1, wherein the body is so adapted to be attached to a circuit board to align with a through hole in the optical mouse.

9. The modulated optical mouse as claimed in claim 2, the sensor and the control element are integrally formed.

10. A modulated optical mouse for a personal computer, the optical mouse comprising:

a body having a predetermined space defined inside the body and having at least one lead securely provided inside the space and feet each electrically connected to one of the feet;

at least one light emitting diode mounted inside the space to electrically connect with the lead, the light emitting diode being at a bottom of the body;

an optical element securely received in the space and adjacent to the light emitting diode; and

at least one sensor received in the space to electrically connect with the lead and to correspond to the light emitting diode,

whereby the light from the light emitting diode is able to be refracted by the optical element and picked by the sensor.

11. The modulated optical mouse as claimed in claim 10 further comprising at least one control element received in the space of the body to be electrically connected to the lead.

12. The modulated optical mouse as claimed in claim 11, wherein the control element is a control IC.

1 13. The modulated optical mouse as claimed in claim 10 further comprising an
2 optical element received in the space of the body.

3 14. The modulated optical mouse as claimed in claim 13, wherein the optical
4 element is composed of a first lens adjacent to the light emitting diode and a second lens
5 adjacent to the sensor.

6 15. The modulated optical mouse as claimed in claim 10, wherein the at least
7 one light emitting diode and the at least one sensor are encapsulated inside the body.

8 16. The modulated optical mouse as claimed in claim 11, wherein the light
9 emitting diode, the sensor and the control element are C.O.B. type.

10 17. The modulated optical mouse as claimed in claim 10, wherein the body is so
11 adapted to be attached to a circuit board to align with a through hole in the optical
12 mouse.

13 18. The modulated optical mouse as claimed in claim 11, the sensor and the
14 control element are integrally formed.

15 19. A modulated optical mouse for a personal computer, the optical mouse
16 comprising:

17 a body having a predetermined space defined inside the body and having at least
18 one lead securely provided inside the space and feet each electrically connected to one
19 of the feet;

20 at least one light emitting diode mounted inside the space to electrically connect
21 with the lead, the light emitting diode being at a bottom of the body;

22 an optical element securely received in the space and adjacent to the light
23 emitting diode;

24 at least one control element received in the space of the body to be electrically

1 connected to the lead; and
2 at least one sensor received in the space to electrically connect with the lead and
3 to correspond to the light emitting diode,
4 whereby the light from the light emitting diode is able to be refracted by the
5 optical element and picked by the sensor.
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